

**1.6K Bolometer Detector System:**

Wavelength coverage  $\leq 5\mu\text{m}$  to  $\geq 50\mu\text{m}$ ,

NEP  $\leq 5\text{E-}14 \text{ WHz}^{-1/2}$

Responsivity  $\geq 2\text{E}5 \text{ V/W}$

Noise Voltage  $\leq 50 \text{ nVHz}^{-1/2}$  at 80 Hz

Modulation frequency  $\geq 1 \text{ kHz}$

3- Position Filter Wheel and Custom optical components:

Helium dewar with Liquid Nitrogen cooled heat shield

Liquid Helium Capacity  $\geq 1.0$  liters

Liquid Nitrogen Capacity  $\geq 0.6$  liters

Liquid Nitrogen fill and removal attachments

Liquid Helium pumping/safety attachment with 1.6K bolometer

Window: 1.0" CsI with protective coating

Cone  $F\# \leq 4.0$

Filter: 5 microns to 10 microns, dia.  $\geq 0.6$  in.

Filter: 7 microns to 13 microns, dia.  $\geq 0.6$  in.

long wave pass filter, 20% cut-on at  $10\mu\text{m}$ , dia.  $\geq 0.6$  in.

**Pumping manifold for item 1, including**

Pressure gauge

Coarse pump valve

Fine pump valve

Bleed valve

Stainless steel vacuum hose  $\geq 3$  ft length

KF centering rings and clamps to interface hose to manifold